

The Semiconductor Data Book

One of the major problems facing workers in the electronics field is the identification and selection of semiconductor devices. Type numbers themselves are of little value since they indicate neither device parameters nor applications. Because it is difficult even to identify the many thousands of device type numbers, let alone evaluate their merits for a particular application, engineers often limit their designs to a few well-known device types — despite the fact that newer or more suitable devices may be available.

This book identifies and characterizes all semiconductor devices with 1N---, 2N---, and 3N--- numbers registered with the Electronics Industries Association at the close of the production date for the book, as well as a broad line of devices with special in-house type numbers. (It provides complete data-sheet specifications for a wide range of semiconductors, and short-form specifications for integrated circuits.) And in addition, to simplify the selection of the most useful semiconductor type numbers, it contains carefully prepared selector guides with recommended devices for specific applications. Properly used, it can be a valuable aid for the design engineer, the component engineer and the purchasing agent in narrowing the broad categories of potentially useable components to those best suited for a specific project.

The information in this book has been carefully checked and is believed to be reliable; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of semiconductor devices any license under the patent rights of any manufacturer.

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DATA BOOK UPDATING SERVICE

Because of the large numbers of semiconductor devices introduced each year, provisions have been made to update the Semiconductor Data Book through the publication of Supplements. At least two Supplements will be published during the life of this Data Book edition.

The Data Book Supplements will contain complete data sheets for newly added Motorola devices, as well as short-form specifications of *all* devices registered with the EIA since the publication of the Data Book or previous Supplement.

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NUMERICAL INDEX

NUMERICAL INDEX

1N-- TYPE NUMBERS

The following table lists EIA-registered devices introduced since the publication of the Motorola Semiconductor Data Book (4th Edition). Major electrical specifications are provided for your convenience.

KEY

KEY

RECTIFIERS

V_R = DC Blocking Voltage
 V_F = Average Forward Voltage Drop
 I_O = Average Rectifier Forward Current
 I_R = Average Reverse Current
 I_{surge} = Peak Surge Current

ZENER DIODES

V_Z (min) = Minimum Zener Breakdown Voltage (Volts)
 V_Z (max) = Maximum Zener Breakdown Voltage (used only when a corresponding V_Z (min) is specified. Otherwise, this column refers to V_Z (nom)* Nominal Zener Breakdown Voltage.)

Tol = Tolerance, for specified Nominal Breakdown Voltage

P_D = Maximum Power Dissipation. M = milliwatts.

W = watts

RECTIFIERS

V_R (volts)	V_F (volts)	I_O (Amp)	I_R (mA)	I_{surge} (Amp)
------------------	------------------	----------------	---------------	----------------------

ZENER DIODES

V_Z (min)	V_Z (nom)* V_Z (max)	Tol V_Z %	P_D
-------------	-----------------------------	------------------	-------

SIGNAL DIODES

PRV (volts)	$V_F @ I_F$ (volts)	I_R	t_{rr} (μs)
----------------	------------------------	-------	-------------------------

REFERENCE DIODES

TC %/°C	V_Z	T (min) °C	T (max) °C
------------	-------	-----------------	-----------------

SHADING INDICATES
SIGNAL DIODES

PRV = Peak Reverse Voltage
 $V_F @ I_F$ = Maximum Forward Voltage at Indicated Forward Current — M = milliamp, A = amp

I_R = Reverse Current —
 M = milliamp, * = microamp
 N = nanoamp

t_{rr} = Reverse Recovery Time

SHADING INDICATES
REFERENCE DIODES

TC = Temperature Coefficient
 V_Z = Zener Breakdown Voltage

T (min) } Temperature Range
 T (max) } over which indicated temperature coefficient is applicable.

The codes listed below define the listed device and indicates the appropriate specification column heading.

R* — Rectifiers
 DR — Diode, Reference

DZ — Diode, Zener
 DS — Diode, Signal

TYPE

MATERIAL

REPLACE-
MENT

REF.

IDENTIFICATION

Numerical Listing of Registered Type Numbers

S = Silicon
 G = Germanium
 SE = Selenium

Type number of recommended replacement or of nearest electrical equivalent fully characterized in this book.

Reference device number indicates specific Data Sheet on which device is characterized.

TYPE	MATERIAL	REPLACEMENT	REF.	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_R (volts)	V_F (volts)	I_O (Amps)	I_R (mA)	I_{surge} (Amps)	V_Z (min)	V_Z (nom) *	Tol V_Z %	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					P_{RV} (volts)	V_F @ I_F (volts)	I_F	I_R	t_{rr} (μs)	TC %/°C	V_Z	T (min) °C	T (max) °C
1N34	G			DS	60	1.0	8.5M	15*					
1N34A	G			DS	60	1.0	5.0M	30*					
1N35	G			DS	50			2.0M					
1N38	G			DS	100	1.0	7.5M	25*					
1N38A	G			DS	100	1.0	4.0M	6.0*					
1N38B	G			DS	100	1.0	4.0M	6.0*					
1N39	G			DS	200	1.0	5.0M	40*					
1N39A	G			DS	200	1.0	5.0M	40*					
1N39B	G			DS	200	1.0	4.0M	650*					
1N40	G			DS	25								
1N41	G			DS	25								
1N42	G			DS	50								
1N43	G			DS	60	1.0	5.0M	20*					
1N44	G			DS	115	1.0	3.0M	410*					
1N45	G			DS	75	1.0	3.0M	410*					
1N46	G			DS	50	1.0	3.0M	1.5M					
1N47	G			DS		1.0	5.0M	400*					
1N48	G			DS	85	1.0	4.0M	833*					
1N49	G			DS	50	1.0	4.0M						
1N50	G			DS	50	1.0	4.0M						
1N51	G			DS	50	1.0	2.5M						
1N52	G			DS	85	1.0	4.0M	150*					
1N52A	G			DS	50	1.0	5.0M	100*					
1N53	S	Microwave Ka-band Mixer:			$f = 34,860$ MHz; $NF = 13.1$ to 9.0 dB								
1N53A	S	Microwave Ka-band Mixer:			$f = 34,860$ MHz; $NF = 13.1$ to 9.0 dB								
1N53B	S	Microwave Ka-band Mixer:			$f = 34,860$ MHz; $NF = 13.1$ to 9.0 dB								
1N53C	S	Microwave Ka-band Mixer:			$f = 34,860$ MHz; $NF = 13.1$ to 9.0 dB								
1N53D	S	Microwave Ka-band Mixer:			$f = 34,860$ MHz; $NF = 13.1$ to 9.0 dB								
1N54	G			DS	35	1.0	3.0M	10*					
1N54A	G			DS	50	1.0	5.0M	7.0*					
1N55	G			DS	150	1.0	3.0M	0.3M					
1N55A	G			DS	150	1.0	4.0M	500*					
1N55B	G			DS	190	1.0	5.0M	500*					
1N56	G			DS	30	1.0	15M	300*					
1N56A	G			DS	40	1.0	15M	300*					
1N57	G			DS	80	1.0	3.6M	300*					
1N58	G			DS	100	1.0	5.0M	800*					
1N58A	G			DS	100	1.0	4.0M	600*					
1N59	G			DS	250	1.0	3.0M	800*					
1N60	G			DS	50	1.0	5.0M	40*					
1N60A	G			DS	40								
1N61	G			DS	130	1.0	5.0M	300*					
1N62	G			DS	110	1.0	5.0M	700*					
1N63	G			DS	125	1.0	4.0M	50*					
1N63A	G			DS	100	1.0	4.0M	50*					
1N64	G			DS	20								
1N65	G			DS	85	1.0	2.5M	200*					
1N66	G			DS	60	1.0	5.0M	50*					
1N66A	G			DS	60	1.0	5.0M	50*					
1N67	G			DS	80	1.0	4.0M	5.0*					
1N67A	G			DS	100	1.0	4.0M	5.0*					
1N68	G			DS	100	1.0	3.0M	625*					
1N68A	G			DS	130	1.0	3.0M	625*					
1N69	G			DS	75	1.0	5.0M	50*					
1N69A	G			DS	60	1.0	5.0M	30*					
1N70	G			DS	125	1.0	3.0M	25*					
1N70A	G			DS	100	1.0	3.0M	25*					
1N71	G			DS	40	1.0	15M	0.3M					
1N73	G			DS		1.7	15M	0.05M					
1N74	G			DS		1.3	15M	0.05M					
1N75	G			DS	125	1.0	2.5M	50*					
1N76	S	Microwave X-band Detector			$f = 9,375$ MHz; $V_0 = 5.0$ mV to 16 mV								
1N76A	S	Microwave X-band Detector			$f = 9,375$ MHz; $V_0 = 5.0$ mV to 16 mV								
1N77A	S	Photosensitive Device; V_F			$= 10$ V @ 10 mA, $I_R(\text{dark}) = 30$ μA @ 50 V								
1N77B	S	Photosensitive Device; V_F			$= 10$ V @ 10 mA, $I_R(\text{dark}) = 30$ μA @ 50 V								
1N78	S	Microwave Ku-band Mixer:			$f = 16,000$ MHz; $NF = 12$ to 7.5 dB								
1N78A	S	Microwave Ku-band Mixer:			$f = 16,000$ MHz; $NF = 12$ to 7.5 dB								
1N78B	S	Microwave Ku-band Mixer:			$f = 16,000$ MHz; $NF = 12$ to 7.5 dB								
1N78C	S	Microwave Ku-band Mixer:			$f = 16,000$ MHz; $NF = 12$ to 7.5 dB								
1N78D	S	Microwave Ku-band Mixer:			$f = 16,000$ MHz; $NF = 12$ to 7.5 dB								
1N78E	S	Microwave Ku-band Mixer:			$f = 16,000$ MHz; $NF = 12$ to 7.5 dB								
1N78F	S	Microwave Ku-band Mixer:			$f = 16,000$ MHz; $NF = 12$ to 7.5 dB								
1N79		Meter Rectifier - to 3,000 MHz											
1N81	G			DS	50	1.0	3.0M	10*					
1N81A	G			DS	40	1.0	3.0M	10*					
1N82	S	Microwave Mixer - to 1,000 MHz;			$NF = 16$ to 14 dB								
1N82A	S	Microwave Mixer - to 1,000 MHz;			$NF = 16$ to 14 dB								
1N82AG	S	Microwave Mixer - to 1,000 MHz;			$NF = 16$ to 14 dB								
1N82G	S	Microwave Mixer - to 1,000 MHz;			$NF = 16$ to 14 dB								
1N83	G			DS	225	1.0	5.0M	30*					
1N84	G			DS	12	1.0	60M	0.1M					
1N85		Photosensitive Device; $I_R(\text{dark})$			$= 20$ μA @ 90 V, Sensitivity = 0.35 $\mu A/mW$ @ 90 V								

1N86-1N194

TYPE	MATERIAL	REPLACEMENT	REF.	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_R (volts)	V_F (volts)	I_O (Amps)	I_R (mA)	I_{surge} (Amps)	V_Z (min)	V_Z (nom) * V_Z (max)	Tol V_Z %	P_D
					SIGNAL DIODES				REFERENCE DIODES				
					P_{RV} (volts)	V_F @ I_F (volts)		I_R	t_r (μs)	T_C %/°C	V_Z	T (min) °C	T (max) °C
1N86	G			DS	70	1.0	4.0M	50*					
1N87	S			DS	23	0.25	0.1M	30*					
1N87A	S			DS	23	0.25	0.1M	10*					
1N88	G			DS	85	1.0	2.5M	0.1M					
1N89	G			DS	100	1.0	3.5M	8.0*					
1N90	G			DS	75	1.0	5.0M	800*					
1N91	G		1N91	R*	100	0.5	0.15	4.0	25				
1N92	G		1N91	R*	200	0.5	0.1	2.0	25				
1N93	G		1N91	R*	300	0.5	0.075	1.3	25				
1N94	G			R*	380	0.7	0.5	0.8	25				
1N95	G			DS	75	1.0	10M	800*					
1N96	G			DS	75	1.0	20M	800*					
1N96A	G			DS	60	1.0	40M	500*					
1N97	G			DS	100	1.0	10M	100*					
1N98	G			DS	100	1.0	20M	100*					
1N98A	G			DS	250	1.0	40M	100*					
1N99	G			DS	100	1.0	10M	50*					
1N100	G			DS	100	1.0	20M	50*					
1N100A	G			DS	80	1.0	40M	0.05M					
1N101	G			DS	150	1.0	10M	10*					
1N102	G			DS	75	1.0	15M	3.0*					
1N103	G			DS	12	1.0	30M	0.1M					
1N104	G			DS	12	1.0	30M	0.1M					
1N105	S	Microwave Switch:		BV = 500 V, P_D = 8.0 W									
1N106	G			DS	300	1.0	20M	70*					
1N107	G			DS	10	1.0	150M	200*					
1N108	G			DS	50	1.0	50M	200*					
1N109	G			DS	15	1.0	1.0M	0.1M					
1N110	G	Microwave Mixer - to		1,000 MHz, NF = 10 dB									
1N111	G			DS	70	1.0	5.0M	25*					
1N112	G			DS	70	1.0	5.0M	50*					
1N113	G			DS	70	1.0	2.5M	25*					
1N114	G			DS	70	1.0	2.5M	50*					
1N115	G			DS	70	1.0	2.5M	100*					
1N116	G			DS	75	1.0	5.0M	100*					
1N117	G			DS	75	1.0	10M	100*					
1N118	G			DS	75	1.0	20M	100*					
1N118A	G			DS	60	1.0	40M	0.1M					
1N119	G			DS	60	1.0	5.0M		0.5				
1N120	G			DS	60	1.0	5.0M		0.5				
1N124	G	Microwave Mixer - to		1,000 MHz, NF = 10 to 8.0 dB									
1N124A	G	Microwave Mixer - to		1,000 MHz, NF = 10 to 8.0 dB									
1N126	G			DS	75	1.0	5.0M	50*					
1N126A	G			DS	75	1.0	25M	50*					
1N127	G			DS	125	1.0	3.0M	25*					
1N127A	G			DS	125	1.0	25M	25*					
1N128	G			DS	50	1.0	3.0M	10*					
1N128A	G			DS	40	1.0	3.0M	10*					
1N132	G			DS	25								
1N133	G			DS	5.0	0.5	3.0M	300*					
1N134	G	UHF Detector: f = 400 MHz											
1N137A	S			DS	36	1.0	3.0M	0.03*					
1N137B	S			DS	36	1.0	20M	0.03*					
1N138A	S			DS	18	1.0	5.0M	0.01*					
1N138B	S			DS	18	1.0	40M	0.01*					
1N139	G			DS	40	1.0	20M	1.5M					
1N140	G			DS	70	1.0	40M	300*					
1N141	G			DS	70	1.0	20M	50*					
1N142	G			DS	100	1.0	3.0M	100*					
1N143	G			DS	100	1.0	40M	100*					
1N144	G			DS	30	1.0	100M	200*					
1N145	G			DS	30	1.0	40M	100*					
1N147	G	UHF Mixer: f = 900 MHz; NF = 10 to 9.0 dB											
1N147A	G	UHF Mixer: f = 900 MHz; NF = 10 to 9.0 dB											
1N149	S	Microwave X-band Mixer: f = 9,375 MHz; NF = 8.3 dB											
1N150	S	Microwave C-band Mixer: f = 6,750 MHz; NF = 9.8 dB											
1N151	G			R*	100	0.7	0.5	2.4	25				
1N152	G			R*	200	0.7	0.5	1.9	25				
1N153	G			R*	300	0.7	0.5	1.2	25				
1N155	S	Microwave Detector: f = 9,000 MHz											
1N155A	S	Microwave Detector: f = 9,000 MHz											
1N156	S	Microwave X-band Mixer: f = 9,375 MHz											
1N158	G			R*	380	1.4	0.5	0.8	25				
1N160	S	Microwave C-band Mixer: f = 6,750 MHz; NF = 11.4 dB											
1N173A	S	UHF Mixer - to 1,000 MHz; NF = 13 dB											
1N188		Photosensitive Device; I_R (dark) = 20 μA @ 40 V, Sensitivity = 10 $\mu A/\mu W$											
1N189		Photosensitive Device; R_p = 4,000 ohm, Sensitivity = 0.083%/fc											
1N190	G			DS	5.0	0.75	10M	0.8M					
1N191	G			DS	90	1.0	5.0M		0.5				
1N192	G			DS	70	1.0	5.0M		0.5				
1N193	G			DS	40	2.0	1.0M		0.5				
1N194	S			DS	40	2.0	1.5M		0.2				

1N194A-1N281

TYPE	MATERIAL	REPLACEMENT	REF.	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_R (volts)	V_F (volts)	I_O (Amps)	I_R (mA)	I_{surge} (Amps)	V_Z (min)	V_Z (nom) *	Tol V_Z %	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					P_{AV} (volts)	V_F @ I_F (volts)	I_F	I_R	t_r (μs)	TC %/°C	V_Z	T (min) °C	T (max) °C
1N194A	S			DS	40	1.0	1.0M	10*	0.2				
1N195	S			DS	40	2.0	3.0M	10*	0.3				
1N196	S			DS	40	2.0	1.0M	10*	0.1				
1N198	G			DS	60	1.0	4.0M	10*					
1N198A	G			DS	60	1.0	4.0M	10*					
1N198B	G			DS	60	1.0	4.0M	10*	0.3				
1N200	S			DZ						7.5			150M
1N201	S			DZ						9.0			150M
1N202	S			DZ						11			150M
1N203	S			DZ						13.5			150M
1N204	S			DZ						17			150M
1N205	S			DZ						20			150M
1N206	S			DZ						25			150M
1N207	S			DZ						30			150M
1N208	S			DZ						37			150M
1N209	S			DZ						43			150M
1N210	S			DZ						52			150M
1N211	S			DZ						62			150M
1N212	S			DZ						75			150M
1N213	S			DZ						90			150M
1N214	S			DZ						110			150M
1N215	S			DZ						135			150M
1N216	S			DZ						170			150M
1N217	S			DZ						200			150M
1N218	S			DZ						250			150M
1N219	S			DZ						300			150M
1N220	S			DZ						370			150M
1N221	S			DZ						430			150M
1N222	S			DZ						520			150M
1N225	S	.5M8.7ZZS10		DZ						7.5	10		150M
1N225A	S	.5M9.1ZZS5		DZ							9.1*	5.0	150M
1N226	S	.5M10.5ZZS10		DZ						9.0	12		150M
1N226A	S	.5M10ZZS5		DZ							10*	5.0	150M
1N227	S	.5M12.7ZZS10		DZ						11	14.5		150M
1N227A	S	.5M12ZZS5		DZ							12*	5.0	150M
1N228	S	.5M15.7ZZS10		DZ						13.5	18		150M
1N228A	S	.5M15ZZS5		DZ							15*	5.0	150M
1N229	S	.5M19ZZS10		DZ						17	21		150M
1N229A	S	.5M18ZZS5		DZ							18*	5.0	150M
1N230	S	.5M23.5ZZS5		DZ						20	27		150M
1N231	S	.5M28.5ZZS10		DZ						25	32		150M
1N232	S	.5M34.5ZZS10		DZ						0.30	39		150M
1N233	S	.5M41ZZS10		DZ						37	45		150M
1N234	S	.5M48.5ZZS10		DZ						43	54		150M
1N235	S	.5M58ZZS10		DZ						52	64		150M
1N236	S	.5M71ZZS10		DZ						62	80		150M
1N237	S	.5M87.5ZZS10		DZ						75	100		150M
1N238	S	.5M105ZZS10		DZ						90	120		150M
1N239	S	.5M127.5ZZS5		DZ									150M
1N248	S	1N248A		R*	50	1.5	10	5.0	200	110	145		150M
1N248A	S	1N248B	1N248B	R*	50	1.5	20	5.0	250				
1N248B	S		1N248B	R*	50	1.5	20	5.0	250				
1N248C	S		1N248B	R*	39	1.2	20	3.8	350				
1N249	S	1N249A		R*	100	1.5	10	5.0	200				
1N249A	S	1N249B	1N248B	R*	100	1.5	20	5.0	250				
1N249B	S		1N248B	R*	100	1.5	20	5.0	250				
1N249C	S		1N248B	R*	77	1.2	20	3.6	350				
1N250	S	1N250A		R*	200	1.5	10	5.0	200				
1N250A	S	1N250B	1N248B	R*	200	1.5	20	5.0	250				
1N250B	S		1N248B	R*	200	1.5	20	5.0	250				
1N250C	S		1N248B	R*	154	1.2	20	3.4	350				
1N251	S			DS									
1N252	S			DS									
1N253	S	MR1121	MR1120	R*	95	1.5	1.0	0.1	4.0				
1N254	S	MR1122	MR1120	R*	190	1.5	0.4		1.5				
1N255	S	MR1124	MR1120	R*	380	1.5	0.4		1.5				
1N256	S	MR1126	MR1120	R*	570	1.5	0.2		1.0				
1N259	S	Microwave Mixer pair - to 9,000 MHz											
1N263	G	Microwave X-band Mixer: $f = 9,375$ MHz; NF = 7.5 dB											
1N264	S	Microwave Mixer pair: $f = 3,000$ MHz											
1N265	G			DS	20	1.0	3.2M	100*					
1N266	G			DS	60	1.0	4.0M	25*					
1N267	G			DS	25	1.0	3.5M	12*					
1N268	G			DS	30	1.0	2.5M	20*					
1N269	G	Microwave S-band Mixer: NF = 7.5 dB											
1N270	G			DS	30	1.0	200M	100*					
1N273	G			DS	30	1.0	100M	20*					
1N276	G			DS	30	1.0	40M	100*	0.3				
1N277	G			DS	100	1.0	100M	75*					
1N278	G			DS	50	1.0	20M	125*					
1N279	G			DS	50	1.0	100M	200*					
1N281	G			DS	60	1.0	100M	30*					

1N282-1N352

TYPE	MATERIAL	REPLACEMENT	REF.	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_R (volts)	V_F (volts)	I_O (Amps)	I_R (mA)	I_{surge} (Amps)	V_Z (min)	V_Z (nom) * V_Z (max)	Tol V_Z %	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV (volts)	V_F @ I_F (volts)	I_F	I_R	t_{rr} (μ s)	TC %/°C	V_Z	T (min) °C	T (max) °C
1N282	G	UHF Mixer; NF = 12.5 dB Microwave X-K band Mixer; NF = 11.3 dB Microwave X-K band Mixer; NF = 11.3 dB		DS		1.0	40M	20M					
1N283	G			DS	20	1.0	200M	20*					
1N285	S			DS	60	1.0	20M	1.5M					
1N286	S			DS	85	1.0	40M	350*					
1N286A	S			DS	85	1.0	20M	50*					
1N287	G			DS	120	1.0	5.0M	100*					
1N288	G			DS	120	1.0	40M	100*					
1N289	G			DS	75	1.0	100M	200*					
1N290	G			DS	60	1.0	5.0M	10*					
1N291	G			DS	60	1.0	5.0M	10*					
1N292	G			DS	60	1.0	5.0M	10*					
1N294	G			DS	40			200*					
1N295	G			DS	40			200*					
1N295A	G			DS	40			200*					
1N296	G			DS	40			200M					
1N297	G			DS	80	1.0	3.5M	10*					
1N297A	G			DS	80	1.0	3.5M	10*					
1N298	G			DS	70	2.0	30M						
1N298A	G			DS	30	2.0	30M	250*					
1N299	G			DS		0.5	3.0M	200M					
1N300	S			DS	15	1.0	15M	0.001*					
1N300A	S			DS	15	1.0	30M	0.001*					
1N300B	S			DS	15	1.0	50M	0.001*					
1N301	S			DS	70	1.0	5.0M	0.05*					
1N301A	S			DS	70	1.0	18M	0.05*					
1N301B	S			DS	70	1.0	50M	0.01*					
1N302	S			DS	225	1.0	1.0M	0.2*					
1N302A	S			DS	225	1.0	5.0M	0.2*					
1N303	S			DS	125	1.0	3.0M	0.1*					
1N303A	S			DS	125	1.0	12M	0.1*					
1N303B	S			DS	125	1.0	50M	0.1*					
1N304	S			DS	55	1.5	2.0M	2.0*					
1N305	G			DS	60	0.8	100M	20*					
1N306	G	Microwave Mixer - to 12,000 MHz; NF = 10.5 dB		DS	15	0.8	100M	2.0*					
1N307	G			DS	125	1.0	100M	5.0*					
1N308	G			DS	8.0	1.0	300M	500*					
1N309	G			DS	40	1.0	100M	100*					
1N310	G			DS	125	1.0	40M	20*					
1N311	S			DS	60	1.0	70M	50*					
1N312	G			DS	125	1.0	40M	10*					
1N313	G			DS				0.05M					
1N314	G			DS	300	0.48	0.075	0.3	25				
1N315	G			R*	200	0.48	0.1	0.16	25				
1N315A	G	1N4001	1N4001	R*	50	2.0	0.2		2.0				
1N316	S			R*	100	2.0	0.2		2.0				
1N317	S			R*	200	2.0	0.2		2.0				
1N318	S			R*	200	2.0	0.2		2.0				
1N319	S	1N4004	1N4001	R*	350	2.0	0.2		2.0				
1N320	S	1N4005	1N4001	R*	500	2.0	0.2		2.0				
1N321	S	1N4007	1N4001	R*	850	1.2	0.25	1.0	10				
1N322	S			R*	850	1.2	0.25	1.0	10				
1N323	S			R*	50	2.0	0.4		2.0				
1N324	S			R*	100	2.0	0.4		2.0				
1N325	S			R*	200	2.0	0.4		2.0				
1N326	S			R*	350	2.0	0.4		2.0				
1N327	S			R*	500	2.0	0.4		2.0				
1N328	S			R*	850	1.2	0.4	0.06	10				
1N329	S			R*	1000	1.2	0.4	0.06	10				
1N330	S			DS	32	1.0	3.0M	0.03*					
1N331	S	MR1124	MR1120	DS	16	1.0	5.0M	0.01*					
1N332	S			R*	400	2.0	0.4	0.2	10				
1N333	S			R*	400	2.0	0.2	0.2	5.0				
1N334	S			R*	300	2.0	0.4	0.2	10				
1N335	S			R*	300	2.0	0.2	0.2	5.0				
1N336	S			R*	200	2.0	0.4	0.1	10				
1N337	S			R*	200	2.0	0.2	0.1	5.0				
1N338	S			R*	100	2.0	1.0	0.2	20				
1N339	S			R*	100	2.0	0.4	0.1	10				
1N340	S			R*	100	2.0	0.2	0.1	5.0				
1N341	S	MR1124	MR1120	R*	400	2.0	0.4	0.5	10				
1N342	S			R*	400	2.0	0.2	0.5	5.0				
1N343	S			R*	300	2.0	0.4	0.5	10				
1N344	S			R*	300	2.0	0.2	0.5	5.0				
1N345	S			R*	200	2.0	0.4	0.5	10				
1N346	S			R*	200	2.0	0.2	0.5	5.0				
1N347	S			R*	100	2.0	1.0	0.5	20				
1N348	S			R*	100	2.0	0.4	0.5	10				
1N349	S			R*	100	2.0	0.2	0.5	5.0				
1N350	S			DS	70	1.0	20M	0.03*					
1N351	S			DS	120	1.0	20M	0.03*					
1N352	S			DS	170	1.0	20M	0.05*					

IN353-IN433

TYPE	MATERIAL	REPLACEMENT	REF.	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_F (volts)	V_F (volts)	I_O (Amps)	I_R (mA)	I_{surge} (Amps)	V_Z (min)	V_Z (nom) * V_Z (max)	Tol V_Z %	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV (volts)	V_F @ I_F (volts)	I_F	t_r (μ s)	TC %/°C	V_Z	T (min) °C	T (max) °C	
1N353	S			DS	225	1.0	20M	0.1*					
1N354	S			DS	325	1.0	20M	0.1*					
1N355	G			DS	100	1.0	4.0M	50*					
1N358	S	Microwave L-X-band Detector											
1N358A	S	Microwave L-X-band Detector											
1N359	S	1N4001		R*	50	2.0	0.1	2.0					
1N360	S	1N4002		R*	100	2.0	0.1	2.0					
1N361	S	1N4003		R*	200	2.0	0.1	2.0					
1N362	S	1N4004		R*	350	2.0	0.1	2.0					
1N363	S	1N4005		R*	500	2.0	0.1	2.0					
1N364	S	1N4007		R*	850	1.2	0.1	0.06	10				
1N365	S	1N4007		R*	1000	1.2	0.1	0.06	10				
1N367	G			DS	15								
1N368	G			R*	200	0.5	0.1	0.3	25				
1N368A	G			R*	200	0.5	0.1	0.16	25				
1N369	S	Microwave S-X-band Detector											
1N369A	S	Microwave L-X-band Detector											
1N370	S	1N5221B		DZ						1.5	2.2		200M
1N371	S	1N5221A		DZ						2.0	2.7		200M
1N372	S	1N5225A		DZ						2.5	3.3		200M
1N373	S	1N5227A		DZ						3.1	3.9		200M
1N374	S	1N5229A		DZ						3.7	4.5		200M
1N375	S	1N5230A		DZ						4.3	5.4		200M
1N376	S	1N5233A		DZ						5.2	6.4		200M
1N377	S	1N5236A		DZ						6.2	8.0		200M
1N378	S	1N5238A		DZ						7.5	10		200M
1N379	S	1N5240A		DZ						9.0	12		200M
1N380	S	1N5243A		DZ						11	14.5		200M
1N381	S	1N5246A		DZ						13.5	18		200M
1N382	S	1N5249A		DZ						17	21		200M
1N383	S	1N5252A		DZ						20	27		200M
1N384	S	1N5255A		DZ						25	32		200M
1N385	S	1N5258A		DZ						30	39		200M
1N386	S	1N5260A		DZ						37	45		200M
1N387	S	1N5261A		DZ						43	54		200M
1N388	S	1N5264A		DZ						52	64		200M
1N389	S	1N5266A		DZ						62	80		200M
1N390	S	1N5269A		DZ						75	100		200M
1N391	S	1N5271A		DZ						90	120		200M
1N392	S	1N5274A		DZ						110	145		200M
1N393	S	1N5277A		DZ						135	180		200M
1N394	S	1N5280A		DZ						170	210		200M
1N395	S	.5M115ZSB10		DZ						200	270		200M
1N396	S	.5M140ZSB10		DZ						250	320		200M
1N397	S	.5M170ZSB10		DZ						300	390		200M
1N398	S	.5M205ZSB10		DZ						370	450		200M
1N399	S	.5M160ZSC10		DZ						430	540		200M
1N400	S	.5M195ZSC10		DZ						520	640		200M
1N401	S			DS	1.5								
1N402	S			DS	2.0								
1N403	S			DS	2.5								
1N404	S			DS	3.1								
1N405	S			DS	3.7	1.0	225M						
1N406	S			DS	4.3	1.0	200M						
1N407	S			DS	5.2	1.0	170M						
1N408	S			DS	6.2	1.0	130M						
1N411B	S	MR1810 SB		R*	50	1.5	50	25	525				
1N412B	S	MR1811 SB		R*	100	1.5	50	25	525				
1N413B	S	MR1813 SB		R*	200	1.5	50	25	525				
1N415B	S	Microwave X-band Mixer; NF = 11.4 to 6.5 dB											
1N415C	S	Microwave X-band Mixer; NF = 11.4 to 6.5 dB											
1N415D	S	Microwave X-band Mixer; NF = 11.4 to 6.5 dB											
1N415E	S	Microwave X-band Mixer; NF = 11.4 to 6.5 dB											
1N415F	S	Microwave X-band Mixer; NF = 11.4 to 6.5 dB											
1N415G	S	Microwave X-band Mixer; NF = 11.4 to 6.5 dB											
1N416B	S	Microwave S-band Mixer; NF = 10.3 to 5.5 dB											
1N416C	S	Microwave S-band Mixer; NF = 10.3 to 5.5 dB											
1N416D	S	Microwave S-band Mixer; NF = 10.3 to 5.5 dB											
1N416E	S	Microwave S-band Mixer; NF = 10.3 to 5.5 dB											
1N416F	S	Microwave S-band Mixer; NF = 10.3 to 5.5 dB											
1N416G	S	Microwave S-band Mixer; NF = 10.3 to 5.5 dB											
1N417	G			DS	60			0.3					
1N418	G			DS	80	1.0	7.0M		0.3				
1N419	G			DS		1.0	125M						
1N429	S		1N429	DR									
1N430	S	1N3156	1N3154	DR						0.002	6.2	-55	100
1N430A	S	1N3157	1N3154	DR						0.001	8.4	-55	100
1N430B	S	1N3157A	1N3154	DR						0.001	8.4	-55	150
1N431	S			DS	68	0.55	15M						
1N432	S			DS	40	1.0	10M	5.0M					
1N432A	S			DS	40	1.0	20M	5.0M					
1N433	S			DS	145	1.0	3.0M	0.1*					

1N433A-1N483

TYPE	MATERIAL	REPLACEMENT	REF.	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_R (volts)	V_F (volts)	I_O (Amps)	I_R (mA)	I_{surge} (Amps)	V_Z (min)	V_Z (nom) *	Tol V_Z %	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV (volts)	V_F @ I_F (volts)		I_R	t_r (μs)	TC %/°C	V_Z	T (min) °C	T (max) °C
1N433A	S			DS	145	1.0	10M	0.1*					
1N434	S			DS	180	1.0	2.0M	0.1*					
1N434A	S			DS	180	1.0	7.0M	0.1*					
1N435	G			DS	40			0.3M					
1N440	S	1N4002	1N4001	R*	100	1.5	0.3	0.3					
1N440B	S	1N4002	1N4001	R*	100	1.5		0.3	15				
1N441	S	1N4003	1N4001	R*	200	1.5	0.3	0.75					
1N441B	S	1N4003	1N4001	R*	200	1.5			15				
1N442	S	1N4004	1N4001	R*	300	1.5	0.3	1.0					
1N442B	S	1N4004	1N4001	R*	300	1.5		0.001	15				
1N443	S	1N4004	1N4001	R*	400	1.5	0.3	1.5					
1N443B	S	1N4004	1N4001	R*	400	1.5			15				
1N444	S	1N4005	1N4001	R*	500	1.5	0.3	1.75					
1N444B	S	1N4005	1N4001	R*	500	1.5			15				
1N445	S	1N4005	1N4001	R*	600	1.5	0.3	2.0					
1N445B	S	1N4005	1N4001	R*	600	1.5		0.002	15				
1N446	S	Microwave K-Ka-band Detector											
1N447	G				DS	30	1.0	25M	20*				
1N448	G				DS	100	1.0	25M	30*				
1N449	G				DS	30	1.0	50M	10*				
1N450	G				DS	100	1.0	50M	30*				
1N451	G				DS	150	1.0	50M	150*				
1N452	G				DS	30	1.0	100M	30*				
1N453	G				DS	100	1.0	100M	30*				
1N454	G			DS	50	1.0	200M	50*					
1N455	G			DS	30	1.0	300M	30*					
1N456	S			DS	25	1.0	40M	25N					
1N456A	S			DS	25	1.0	100M	25N					
1N457	S			DS	60	1.0	20M	25N					
1N457A	S			DS	60	1.0	100M	25N					
1N458	S			DS	125	1.0	2.0M	25N					
1N458A	S			DS	125	1.0	100M	25N					
1N459	S			DS	175	1.0	3.0M	25N					
1N459A	S			DS	175	1.0	100M	25N					
1N460	S			DS	90	1.0	5.0M	0.1*					
1N460A	S			DS	90	1.0	15M	0.1*					
1N461	S			DS	25	1.0	15M	0.5*					
1N461A	S			DS	25	1.0	100M	0.5*					
1N462	S			DS	60	1.0	5.0M	0.5*					
1N462A	S			DS	60	1.0	100M	0.5*					
1N463	S			DS	175	1.0	1.0M	0.5*					
1N463A	S			DS	175	1.0	100M	0.5*					
1N464	S			DS	125	1.0	3.0M	0.5*					
1N464A	S			DS	125	1.0	100M	0.5*					
1N465	S	1N5223A	1N5221	DZ						2.0	3.2		200M
1N465A	S	1N5223B	1N5221	DZ							2.7*	5.0	200M
1N465B	S	.5M2.7ZS1		DZ							2.7*	1.0	200M
1N466	S	1N5226A	1N5221	DZ						3.0	3.9		200M
1N466A	S	1N5226B	1N5221	DZ							3.3*	5.0	200M
1N466B	S	.5M3.3ZS1		DZ						3.7	3.3*	1.0	200M
1N467	S	1N5228B	1N5221	DZ							4.5		200M
1N467A	S	1N5228B	1N5221	DZ							3.9*	5.0	200M
1N467B	S	.5M3.9ZS1		DZ						4.3	3.9*	1.0	200M
1N468	S	1N5230A	1N5221	DZ							5.4		200M
1N468A	S	1N5230B	1N5221	DZ							4.7*	5.0	200M
1N468B	S	.5M4.7ZS1		DZ						5.2	4.7*	1.0	200M
1N469	S	1N5232B	1N5221	DZ							6.4		200M
1N469A	S	1N5232B	1N5221	DZ							5.6*	5.0	200M
1N469B	S	.5M5.6ZS1		DZ						6.2	5.6*	1.0	200M
1N470	S	1N5235B	1N5221	DZ							8.0		200M
1N470A	S	1N5235B	1N5221	DZ							6.8*	5.0	200M
1N470B	S	.5M6.8ZS1		DZ						3.0	6.8*	1.0	200M
1N471	S	.5M3.4ZS10		DZ							3.9		200M
1N471A	S	.5M3.3ZS5		DZ							3.3*	5.0	200M
1N472	S	.5M4.1ZS10		DZ						3.7	4.5		200M
1N472A	S	.5M3.9ZS5		DZ							3.9*	5.0	200M
1N473	S	.5M4.8ZS10		DZ						4.3	5.4		200M
1N473A	S	.5M4.7ZS5		DZ							4.7*	5.0	200M
1N474	S	.5M5.8ZS10		DZ						5.2	6.4		200M
1N474A	S	.5M5.6ZS5		DZ							5.6*	5.0	200M
1N475	S	.5M7.1ZS10		DZ						6.2	8.0		150M
1N475A	S	.5M6.8ZS5		DZ							6.8*	5.0	200M
1N476	G			DS	90	1.0	2.5M	11*					
1N477	G			DS	90	1.0	2.5M	11*					
1N478	G			DS	90	1.0	5.0M	7.0*					
1N479	G			DS	90	1.0	5.0M	7.0*					
1N480	G			DS	60	1.0	5.0M		0.5				
1N481	G			R*	200	0.5	0.1	1.9	25				
1N482	S			DS	36	1.0	100M	0.25*					
1N482A	S			DS	36	1.0	100M	25N					
1N482B	S			DS	36	1.0	100M	25N					
1N483	S			DS	70	1.0	100M	25N					

1N483A-1N568

TYPE	MATERIAL	REPLACEMENT	REF.	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_F (volts)	V_F (volts)	I_O (Amps)	I_R (mA)	I_{surge} (Amps)	V_Z (min)	V_Z (nom) *	Tol V_Z %	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					P_{AV} (watts)	$V_F @ I_F$ (volts)	I_F	I_R	t_{rr} (μ s)	TC %/°C	V_Z	T (min) °C	T (max) °C
1N483A	S			DS	70	1.0	100M	25N					
1N483B	S			DS	70	1.0	100M	25N					
1N484	S			DS	130	1.1	100M	0.25*					
1N484A	S			DS	130	1.0	100M	25N					
1N484B	S			DS	130	1.0	100M	25N					
1N485	S			DS	180	1.1	100M	0.25*					
1N485A	S			DS	180	1.0	100M	25N					
1N485B	S			DS	180	1.0	100M	25N					
1N486	S			DS	225	1.1	100M	0.25*					
1N486A	S			DS	225	1.0	100M	0.05*					
1N486B	S			DS	225	1.0	100M	0.05*					
1N487	S			DS	300	1.1	100M	0.25*					
1N487A	S			DS	300	1.0	100M	0.1*					
1N487B	S			DS	300	1.0	100M	0.1*					
1N488	S			DS	380	1.1	100M	0.25*					
1N488A	S			DS	380	1.0	100M	0.1*					
1N488B	S			DS	380	1.0	100M	0.1*					
1N490	G			DS	90	1.0	100M	20*	0.5				
1N497	G			DS	30	1.0	100M	20*					
1N498	G			DS	60	1.0	100M	25*					
1N499	G			DS	75	1.0	100M	30*					
1N500	G			DS	80	1.0	100M	40*					
1N501	G			DS	100	1.0	100M	40*					
1N502	G			DS	120	1.0	100M	50*					
1N503	S			R*	50	1.2	0.33	0.5					
1N504	S			R*	100	1.2	0.33	0.5					
1N505	S			R*	200	1.2	0.33	0.5					
1N506	S			R*	300	1.2	0.33	0.5					
1N507	S			R*	400	1.2	0.33	0.25					
1N508	S			R*	600	1.2	0.33	0.25					
1N509	S			R*	800	1.2	0.33	0.25					
1N510	S			R*	1000	1.2	0.33	0.25					
1N511	S			R*	50	1.2	1.0	0.5					
1N512	S			R*	100	1.2	1.0	0.5					
1N513	S			R*	200	1.2	1.0	0.5					
1N514	S			R*	300	1.2	1.0	0.5					
1N515	S			R*	400	1.2	1.0	0.25					
1N516	S			R*	600	1.2	1.0	0.25					
1N517	S			R*	800	1.2	1.0	0.25					
1N518	S			R*	1000	1.2	1.0	0.25					
1N519	S			R*	50	1.2	1.25	0.5					
1N520	S			R*	100	1.2	1.25	0.5					
1N521	S			R*	200	1.2	1.25	0.5					
1N522	S			R*	300	1.2	1.25	0.5					
1N523	S			R*	400	1.2	1.25	0.25					
1N524	S			R*	600	1.2	1.25	0.25					
1N525	S			R*	800	1.2	1.25	0.25					
1N526	S			R*	1000	1.2	1.25	0.25					
1N527	G			DS	10	0.3	1.0M	50*					
1N530	S	1N4002	1N4001	R*	100	2.0	0.3	0.003	3.0				
1N531	S	1N4003	1N4001	R*	200	2.0	0.3	3.0					
1N532	S	1N4004	1N4001	R*	300	2.0	0.3	0.01	3.0				
1N533	S			R*	400	2.0	0.3	0.015	3.0				
1N534	S	1N4005	1N4001	R*	500	2.0	0.3	3.0					
1N535	S	1N4005	1N4001	R*	600	2.0	0.3	0.02	3.0				
1N536	S	1N4001	1N4001	R*	50	0.5	0.25	0.4	15				
1N537	S	1N4002	1N4001	R*	100	0.4	0.25	0.5	15				
1N538	S	1N4003	1N4001	R*	200	0.3	0.25	0.5	15				
1N539	S	1N4004	1N4001	R*	300	0.5	0.25	0.3	15				
1N540	S	1N4004	1N4001	R*	400	0.5	0.25	0.3	15				
1N541	G			DS	45	2.2	10M	18*					
1N542	G			DS									
1N543	S			R*	1000	10	0.005	0.1					
1N543A	S			R*	1000	8.0	0.025	0.1					
1N544	S			R*	1000	10	0.015	0.1					
1N544A	S			R*	1000	10	0.075	0.1					
1N547	S	1N4005	1N4001	R*	600	1.1	0.25	0.35	15				
1N548	S			R*	900	1.1	0.3	0.35	15				
1N549	S			R*	1200	1.1	0.3	0.35	15				
1N550	S	MR1121	MR1120	R*	100	1.5	0.5	0.001	4.0				
1N551	S	MR1122	MR1120	R*	200	1.5	0.5	4.0					
1N552	S	MR1123	MR1120	R*	300	1.5	0.5	4.0					
1N553	S	MR1124	MR1120	R*	400	1.5	0.5	4.0					
1N554	S	MR1125	MR1120	R*	500	1.5	0.5	4.0					
1N555	S			R*	600	1.5	0.5	0.005	4.0				
1N560	S	1N4006	1N4001	R*	800	1.75	0.25	0.015	2.0				
1N561	S	1N4007	1N4001	R*	1000	1.75	0.25	0.02	2.0				
1N562	S	MR1128	MR1120	R*	800	1.75	0.4	0.015	3.0				
1N563	S	MR1130	MR1120	R*	1000	1.75	0.4	0.02	3.0				
1N566	G			DS	220	1.0	20M	0.2M					
1N567	G			DS	100	1.0	150M	0.15M	0.3				
1N568	G			DS	7.0	0.32	5.0M	0.1M	0.08				

1N569-1N660

TYPE	MATERIAL	REPLACEMENT	REF.	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_R (volts)	V_F (volts)	I_O (Amps)	I_R (mA)	I_{surge} (Amps)	V_Z (min)	V_Z (nom) *	Tol V_Z %	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV (volts)	V_F @ I_F (volts)		I_R	t_r (μ s)	TC %/°C	V_Z	T (min) °C	T (max) °C
1N569	G			DS	12	0.5	250M	0.05M					
1N570	S			R*	1250	10	37.5	0.1					
1N571	G			DS		1.0	200M	100*	4.0				
1N573	G			R*	380	0.15	0.25						
1N574	G			R*	380	0.15	0.3						
1N575	G			R*	380	0.3	0.35						
1N575A	G			R*	380	0.15	0.35						
1N576A	G			R*	380	0.15	0.4						
1N581	G			R*	380	0.15	0.25						
1N582	G			R*	380	0.15	0.3						
1N583	G			R*	380	0.15	0.35						
1N584	G			R*	380	0.15	0.4						
1N588	S			R*	1500	1.75	0.1	0.1	5.0				
1N589	S	MR991A	MR990A	R*	1500	1.75	0.25	0.1	10				
1N590	S			R*	1500	8.0	0.075	0.1					
1N591	S			R*	1500	8.0	0.075	0.1					
1N596	S	1N4005	1N4001	R*	600	3.0	0.125	0.025	1.0				
1N597	S	1N4006	1N4001	R*	800	3.0	0.125	0.025	1.0				
1N598	S	1N4007	1N4001	R*	1000	3.0	0.125	0.025	1.0				
1N599	S	1N4001	1N4001	R*	50	1.5	0.3	0.025	2.0				
1N599A	S	1N4001	1N4001	R*	50	1.5	0.3	0.001	2.0				
1N600	S	1N4002	1N4001	R*	100	1.5	0.3	0.025	2.0				
1N600A	S	1N4002	1N4001	R*	100	1.5	0.3	0.001	2.0				
1N601	S	1N4003	1N4001	R*	150	1.5	0.3	0.025	2.0				
1N601A	S	1N4003	1N4001	R*	150	1.5	0.3	0.001	2.0				
1N602	S	1N4003	1N4001	R*	200	1.5	0.3	0.025	2.0				
1N602A	S	1N4003	1N4001	R*	200	1.5	0.3	0.001	2.0				
1N603	S	1N4004	1N4001	R*	300	1.5	0.3	0.025	2.0				
1N603A	S	1N4004	1N4001	R*	300	1.5	0.3	0.001	2.0				
1N604	S	1N4004	1N4001	R*	400	1.5	0.3	0.025	2.0				
1N604A	S	1N4004	1N4001	R*	400	1.5	0.3		2.0				
1N605	S	1N4005	1N4001	R*	500	1.5	0.3	0.025	2.0				
1N605A	S	1N4005	1N4001	R*	500	1.5	0.3	0.002	2.0				
1N606	S	1N4005	1N4001	R*	600	1.5	0.3	0.025	2.0				
1N606A	S	1N4005	1N4001	R*	600	1.5	0.3		2.0				
1N607	S			R*	50	1.5	0.8	0.025	3.0				
1N607A	S	MR1120	MR1120	R*	50	1.5	0.8	0.001	3.0				
1N608	S			R*	100	1.5	0.8	0.025	3.0				
1N608A	S	MR1121	MR1120	R*	100	1.5	0.8	0.001	3.0				
1N609	S			R*	150	1.5	0.8	0.025	3.0				
1N609A	S	MR1122	MR1120	R*	150	1.5	0.8	0.001	3.0				
1N610	S			R*	200	1.5	0.8	0.025	3.0				
1N610A	S	MR1122	MR1120	R*	200	1.5	0.8	0.001	3.0				
1N611	S			R*	300	1.5	0.8	0.025	3.0				
1N611A	S	MR1123	MR1120	R*	300	1.5	0.8	0.001	3.0				
1N612	S			R*	400	1.5	0.8	0.025	3.0				
1N612A	S	MR1124	MR1120	R*	400	1.5	0.8	1.5	3.0				
1N613	S			R*	500	1.5	0.8	0.025	3.0				
1N613A	S	MR1125	MR1120	R*	500	1.5	0.8	0.002	3.0				
1N614	S			R*	600	1.5	0.8	0.025	3.0				
1N614A	S	MR1126	MR1120	R*	600	1.5	0.8	2.5	3.0				
1N615	G			R*	300		0.075	1.2	25				
1N616	G			DS	20	1.0	8.0M	0.4M					
1N617	G			DS	115	1.0	3.0M	11*					
1N618	G			DS	115	1.0	5.0M	7.0*					
1N619	S			DS	30	1.0	3.0M	0.08*					
1N622	S			DS	150	1.0	7.0M	0.16*					
1N625	S			DS		1.5	4.0M	1.0*	1.0				
1N626	S			DS		1.5	4.0M	1.0*	1.0				
1N627	S			DS		1.5	4.0M	1.0*	1.0				
1N628	S			DS		1.5	4.0M	1.0*	1.0				
1N629	S			DS		1.5	4.0M	1.0*	1.0				
1N630	S	Microwave L-X-band Detector											
1N631	G			DS	60				0.3				
1N632	G			DS	60	1.0	7.0M		0.3				
1N633	G			DS	80	1.0	125M		0.3				
1N634	G			DS	100	1.0	50M	45*					
1N635	G			DS	150	1.0	50M	175*					
1N636	G			DS	60	1.0	2.5M	10*					
1N643	S			DS	175	1.0	10M	1.0*	0.3				
1N643A	S			DS	175	1.0	100M	1.0*	0.3				
1N645	S			DS	225	1.0	400M	0.2*					
1N645A	S	1N4003	1N4001	DS	225	1.0	400M	0.05*					
1N646	S	1N4004	1N4001	DS	300	1.0	400M	0.2*					
1N647	S	1N4004	1N4001	DS	400	1.0	400M	0.2*					
1N648	S	1N4005	1N4001	DS	500	1.0	400M	0.2*					
1N649	S	1N4005	1N4001	DS	600	1.0	400M	0.2*					
1N658	S			DS	100	1.0	100M	0.05*	0.3				
1N658A	S			DS	120	1.0	100M	25N	0.3				
1N659	S			DS	50	1.0	6.0M	5.0*	0.3				
1N659A	S			DS	60	1.0	10M	25N	0.3				
1N660	S			DS	100	1.0	6.0M	5.0*	0.3				

1N660A-1N721A

TYPE	MATERIAL	REPLACEMENT	REF.	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_R (volts)	V_F (volts)	I_O (Amps)	I_R (mA)	I_{surge} (Amps)	V_Z (min)	V_Z (nom) *	Tol V_Z %	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					PRV (volts)	V_F @ I_F (volts)		I_R	t_{rr} (μ s)	TC %/°C	V_Z	T (min) °C	T (max) °C
1N660A	S			DS	120	1.0	10M	25N	0.3				
1N661	S			DS	200	1.0	6.0M	10*	0.3				
1N661A	S			DS	240	1.0	10M	25N	0.3				
1N662	S			DS	80	1.0	10M	1.0*	0.5				
1N662A	S			DS	80	1.0	100M	1.0*	0.3				
1N663	S			DS	80	1.0	100M	5.0*	0.5				
1N663A	S			DS	80	1.0	100M	0.1*	0.3				
1N664	S	1N5237A	1N5221	DZ							8.2*	10	250M
1N665	S	1N5242A	1N5221	DZ						10.8	13.2		0.25W
1N666	S	1N5245B	1N5221	DZ						14.2	15.8		0.25W
1N667	S	1N5248A	1N5221	DZ						16.2	19.8		0.25W
1N668	S	1N5251A	1N5221	DZ						19.8	24.2		0.25W
1N669	S	1N5254A	1N5221	DZ						24.3	29.7		0.25W
1N670	S	1N5266B	1N5221	DZ							68*	5.0	250M
1N671	S	1N5271A	1N5221	DZ						90	110		0.25W
1N672	S	1N5276A	1N5221	DZ						135	165		0.25W
1N673	S			DS	350	1.0	250M	1.0*					
1N674	S	1N5230A	1N5221	DZ							4.7*	10	250M
1N675	S	1N5234B	1N5221	DZ							6.2*	5.0	250M
1N676	S	1N4002	1N4001	R*	100	1.0	0.075	0.2	3.0				
1N677	S	1N4002	1N4001	R*	100	1.0	0.15	0.2	5.0				
1N678	S	1N4003	1N4001	R*	200	1.0	0.075	0.2	3.0				
1N679	S	1N4003	1N4001	R*	200	1.0	0.15	0.2	5.0				
1N681	S	1N4004	1N4001	R*	300	1.0	0.075	0.2	3.0				
1N682	S	1N4004	1N4001	R*	300	1.0	0.15	0.2	5.0				
1N683	S	1N4004	1N4001	R*	400	1.0	0.075	0.2	3.0				
1N684	S	1N4004	1N4001	R*	400	1.0	0.15	0.2	5.0				
1N685	S	1N4005	1N4001	R*	500	1.0	0.075	0.2	3.0				
1N686	S	1N4005	1N4001	R*	500	1.0	0.15	0.2	5.0				
1N687	S	1N4005	1N4001	R*	600	1.0	0.075	0.2	3.0				
1N689	S	1N4005	1N4001	R*	600	1.0	0.15	0.2	5.0				
1N690	S			DS	36	1.0	400M	0.25*	0.8				
1N691	S			DS	70	1.0	400M	0.25*	0.8				
1N692	S			DS	100	1.0	400M	0.25*	0.8				
1N693	S			DS	130	1.0	400M	0.25*	0.8				
1N695	G			DS	20	1.0	100M	2.0*	0.3				
1N695A	G			DS	25	0.5	10M	2.0*	0.3				
1N696	S			DS	30	1.0	10M	15N	5.0				
1N697	S			DS		1.0	0.25A	1.0*					
1N698	C			DS	25	0.65	30M	160*	0.5				
1N699	G			DS	80	1.0	100M		0.3				
1N701	S	1N5240B *	1N5221	DZ						9.5	10.5		0.25W
1N702	S	1N5223A *	1N5221	DZ						2.0	3.2		250M
1N702A	S	1N5223B *	1N5221	DZ						2.3	2.9		250M
1N703	S	1N5227A *	1N5221	DZ						3.0	3.9		250M
1N703A	S	1N5227B *	1N5221	DZ						3.23	3.67		250M
1N704	S	1N5229A *	1N5221	DZ						3.7	4.5		250M
1N704A	S	1N5229B *	1N5221	DZ						3.9	4.3		250M
1N705	S	1N5230A *	1N5221	DZ						4.3	5.4		250M
1N705A	S	1N5230B *	1N5221	DZ						4.58	5.12		250M
1N706	S	1N5232A *	1N5221	DZ						5.2	6.4		250M
1N706A	S	1N5232B *	1N5221	DZ						5.5	6.1		250M
1N707	S	1N5236A *	1N5221	DZ						6.2	8.0		250M
1N707A	S	1N5236B *	1N5221	DZ						6.65	7.55		250M
1N708	S	1N5232A *	1N5221	DZ							5.6*	10	250M
1N708A	S	1N5232B *	1N5221	DZ							5.6*	5.0	250M
1N709	S	1N5234A *	1N5221	DZ							6.2*	5.0	250M
1N709A	S	1N5234B *	1N5221	DZ							6.2*	5.0	250M
1N710	S	1N5235A *	1N5221	DZ							6.8*	10	250M
1N710A	S	1N5235B *	1N5221	DZ							6.8*	5.0	250M
1N711	S	1N5236A *	1N5221	DZ							7.5*	10	250M
1N711A	S	1N5236B *	1N5221	DZ							7.5*	5.0	250M
1N712	S	1N5237A *	1N5221	DZ							8.2*	10	250M
1N712A	S	1N5237B *	1N5221	DZ							8.2*	5.0	250M
1N713	S	1N5239A *	1N5221	DZ							9.1*	10	250M
1N713A	S	1N5239B *	1N5221	DZ							9.1*	5.0	250M
1N714	S	1N5240A *	1N5221	DZ							10*	10	250M
1N714A	S	1N5240B *	1N5221	DZ							10*	5.0	250M
1N715	S	1N5241A *	1N5221	DZ							11*	10	250M
1N715A	S	1N5241B *	1N5221	DZ							11*	5.0	250M
1N716	S	1N5242A *	1N5221	DZ							12*	10	250M
1N716A	S	1N5242B *	1N5221	DZ							12*	5.0	250M
1N717	S	1N5243A *	1N5221	DZ							13*	10	250M
1N717A	S	1N5243B *	1N5221	DZ							13*	5.0	250M
1N718	S	1N5245A *	1N5221	DZ							15*	10	250M
1N718A	S	1N5245B *	1N5221	DZ							15*	5.0	250M
1N719	S	1N5246A *	1N5221	DZ							16*	10	250M
1N719A	S	1N5246B *	1N5221	DZ							16*	5.0	250M
1N720	S	1N5248A *	1N5221	DZ							18*	10	250M
1N720A	S	1N5248B *	1N5221	DZ							18*	5.0	250M
1N721	S	1N5250A *	1N5221	DZ							20*	10	250M
1N721A	S	1N5250B *	1N5221	DZ							20*	5.0	250M

Replacement * denotes exact device type replacement available on request.

1N722-1N766

TYPE	MATERIAL	REPLACEMENT	REF.	IDENTIFICATION	RECTIFIERS					ZENER DIODES			
					V_R (volts)	V_F (volts)	I_O (Amps)	I_R (mA)	I_{surge} (Amps)	V_Z (min)	V_Z (nom) * V_Z (max)	Tol V_Z %	P_D
					SIGNAL DIODES					REFERENCE DIODES			
					P_{RV} (mW)	$V_F @ I_F$ (volts)	I_F	t_r (μ s)	T_C °C	V_Z	T (min) °C	T (max) °C	
1N722	S	1N5251A *	1N5221	DZ							22*	10	250M
1N722A	S	1N5251B *	1N5221	DZ							22*	5.0	250M
1N723	S	1N5252A *	1N5221	DZ							24*	10	250M
1N723A	S	1N5252B *	1N5221	DZ							24*	5.0	250M
1N724	S	1N5254A *	1N5221	DZ							27*	10	250M
1N724A	S	1N5254B *	1N5221	DZ							27*	5.0	250M
1N725	S	1N5256A *	1N5221	DZ							30*	10	250M
1N725A	S	1N5256B *	1N5221	DZ							30*	5.0	250M
1N726	S	1N5257A *	1N5221	DZ							33*	10	250M
1N726A	S	1N5257B *	1N5221	DZ							33*	5.0	250M
1N727	S	1N5258A *	1N5221	DZ							36*	10	250M
1N727A	S	1N5258B *	1N5221	DZ							36*	5.0	250M
1N728	S	1N5259A *	1N5221	DZ							39*	10	250M
1N728A	S	1N5259B *	1N5221	DZ							39*	5.0	250M
1N729	S	1N5260A *	1N5221	DZ							43*	10	250M
1N729A	S	1N5260B *	1N5221	DZ							43*	5.0	250M
1N730	S	1N5261A *	1N5221	DZ							47*	10	250M
1N730A	S	1N5261B *	1N5221	DZ							47*	5.0	250M
1N731	S	1N5262A *	1N5221	DZ							51*	10	250M
1N731A	S	1N5262B *	1N5221	DZ							51*	5.0	250M
1N732	S	1N5263A *	1N5221	DZ							56*	10	250M
1N732A	S	1N5263B *	1N5221	DZ							56*	5.0	250M
1N733	S	1N5265A *	1N5221	DZ							62*	10	250M
1N733A	S	1N5265B *	1N5221	DZ							62*	5.0	250M
1N734	S	1N5266A *	1N5221	DZ							68*	10	250M
1N734A	S	1N5266B *	1N5221	DZ							68*	5.0	250M
1N735	S	1N5267A *	1N5221	DZ							75*	10	250M
1N735A	S	1N5267B *	1N5221	DZ							75*	5.0	250M
1N736	S	1N5268A *	1N5221	DZ							82*	10	250M
1N736A	S	1N5268B *	1N5221	DZ							82*	5.0	250M
1N737	S	1N5270A *	1N5221	DZ							91*	10	250M
1N737A	S	1N5270B *	1N5221	DZ							91*	5.0	250M
1N738	S	1N5271A *	1N5221	DZ							100*	10	250M
1N738A	S	1N5271B *	1N5221	DZ							100*	5.0	250M
1N739	S	1N5272A *	1N5221	DZ							110*	10	250M
1N739A	S	1N5272B *	1N5221	DZ							110*	5.0	250M
1N740	S	1N5273A *	1N5221	DZ							120*	10	250M
1N740A	S	1N5273B *	1N5221	DZ							120*	5.0	250M
1N741	S	1N5274A *	1N5221	DZ							130*	10	250M
1N741A	S	1N5274B *	1N5221	DZ							130*	5.0	250M
1N742	S	1N5276A *	1N5221	DZ							150*	10	250M
1N742A	S	1N5276B *	1N5221	DZ							150*	5.0	250M
1N743	S	1N5277A *	1N5221	DZ							160*	10	250M
1N743A	S	1N5277B *	1N5221	DZ							160*	5.0	250M
1N744	S	1N5279A *	1N5221	DZ							180*	10	250M
1N744A	S	1N5279B *	1N5221	DZ							180*	5.0	250M
1N745	S	1N5281A *	1N5221	DZ							200*	0	250M
1N745A	S	1N5281B *	1N5221	DZ							200*	5.0	250M
1N746	S		1N702	DZ							3.3*	10	400M
1N746A	S		1N702	DZ							3.3*	5.0	400M
1N747	S		1N702	DZ							3.6*	10	400M
1N747A	S		1N702	DZ							3.6*	5.0	400M
1N748	S		1N702	DZ							3.9*	10	400M
1N748A	S		1N702	DZ							3.9*	5.0	400M
1N749	S		1N702	DZ							4.3*	10	400M
1N749A	S		1N702	DZ							4.3*	5.0	400M
1N750	S		1N702	DZ							4.7*	10	400M
1N750A	S		1N702	DZ							4.7*	5.0	400M
1N751	S		1N702	DZ							5.1*	10	400M
1N751A	S		1N702	DZ							5.1*	5.0	400M
1N752	S		1N702	DZ							5.6*	10	400M
1N752A	S		1N702	DZ							5.6*	5.0	400M
1N753	S		1N702	DZ							6.2*	10	400M
1N753A	S		1N702	DZ							6.2*	5.0	400M
1N754	S		1N702	DZ							6.8*	10	400M
1N754A	S		1N702	DZ							6.8*	5.0	400M
1N755	S		1N702	DZ							7.5*	10	400M
1N755A	S		1N702	DZ							7.5*	5.0	400M
1N756	S		1N702	DZ							8.2*	10	400M
1N756A	S		1N702	DZ							8.2*	5.0	400M
1N757	S		1N702	DZ							9.1*	10	400M
1N757A	S		1N702	DZ							9.1*	5.0	400M
1N758	S		1N702	DZ							10.0*	10	400M
1N758A	S		1N702	DZ							10.0*	5.0	400M
1N759	S		1N702	DZ							12.0*	10	400M
1N759A	S		1N702	DZ							12.0*	5.0	400M
1N761	S	1N5230A *	1N5221	DZ						4.3	5.4	250M	
1N762	S	1N5232B *	1N5221	DZ						5.2	6.4	250M	
1N763	S	1N5238B *	1N5221	DZ						6.2	8.0	250M	
1N764	S	1N5238A *	1N5221	DZ						7.5	10.0	250M	
1N765	S	1N5240A *	1N5221	DZ						9.0	12.0	250M	
1N766	S	1N5243A *	1N5221	DZ						11.0	14.5	250M	

Replacement * denotes exact device type replacement available on request.